

GUIDELINES FOR A SAFE PRACTICE ENVIRONMENT:

**SAFE PATIENT
HANDLING** TO
REDUCE INJURIES AND
IMPROVE PATIENT CARE

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INTRODUCTION

Patient handling has long been recognized as a job task that places nurses and other direct patient care providers at risk for injury. Nurses perform a variety of patient handling tasks such as lifting, transferring, and repositioning throughout a wide range of practice settings. A well-established body of research has documented the direct association between performing these tasks manually and work-related musculoskeletal disorders and injuries among nurses. Consequently, many nurses often work in pain or have prematurely left professional practice roles in direct patient care, thus, contributing to the nursing shortage. Additionally, there are tremendous costs to employers with respect to workers' compensation, treatment and rehabilitation, and replacement of injured nurses. Patients are also at risk for adverse events such as falls secondary to unsafe, manual patient handling. However, strategies that utilize innovative methods and specialized equipment for patient handling can prevent debilitating injury among healthcare workers as well as enhance the quality of patient care. And, model programs have successfully replaced outdated patient handling approaches that rely on manual methods and body mechanics.

Purpose

The purpose of this document is to provide guidance that supports a culture of safety for nurses and their patients by promoting safe patient handling concepts, injury prevention, and the role of the nurse to recognize characteristics of the work environment and job tasks that put the nurse and patient at risk.

BACKGROUND

The concept of “safe patient handling” refers to a multifaceted, programmatic approach to reduce the risk of injury to nurses and direct patient care providers, while also providing patients a more secure, dignified means to be lifted, transferred, and repositioned. Safe patient handling is premised on ergonomic principles in which the job is fit to workers rather than forcing workers to be fit into jobs. For nearly 30 years, researchers and advocates have called for the need to implement ergonomic-based interventions for patient care. Since the late 1990s, other countries have established some form of safe patient handling policy on a national level, most notably in Australia, Denmark, Finland, the Netherlands, Norway, Sweden, and the United Kingdom (Nelson, Collins, et al, 2007).

In November 2000, the federal Occupational Safety and Health Administration (OSHA) had issued the Ergonomics Program Standard (29 CFR 1910.900; OSHA, 2000). The preamble of this final rule stated that “[b]ased on its review of the evidence in the record as a whole, OSHA concludes that the final standard is needed to protect employees in general industry workplaces who are at significant risk of incurring a work-related musculoskeletal disorder but are not currently protected by an ergonomics program” (p. 682). The passage of the federal OSHA Ergonomics Program Standard was viewed as a significant step towards addressing a major national occupational health problem. This federal regulation would have applied to health care work environments nationally, requiring

employers to consider and adopt safe patient handling practices. However, in March 2001, this OSHA rule was repealed via the Congressional Review Act of 1996, which gives Congress the power to overturn federal regulations. To date, no national standard or law exists relevant to patient handling or, more broadly, requiring ergonomic protections in the workplace.

In 2006, the State of Washington enacted into law RCW 70.41.390 which defines safe patient handling as “the use of engineering controls, lifting and transfer aids, or assistive devices, by lift teams or other staff, instead of manual lifting to perform the acts of lifting, transferring, and repositioning health care patients and residents” (p. 4, lines 8-11). RCW_70.41.390 requires hospitals to have the following:

- A safe patient handling committee, with at least half the members being front-line non-managerial employees who provide direct patient care.
- A safe patient handling program with a policy that covers all units and shifts, includes a patient handling hazard assessment, and conducts an annual evaluation.
- At least one patient handling lift per acute care unit, OR one lift for every 10 acute care inpatient beds, OR lift equipment for use by lift teams.
- Procedures that give an employee the right to refuse performing a patient handling task that may pose an unacceptable risk of injury to the patient.
- Training for staff on policies and equipment at least annually.

OTHER PRIOR EFFORTS TO IMPLEMENT SAFE PATIENT HANDLING

In March 2003, OSHA released its Guidelines for Nursing Homes: Ergonomics for the Prevention of Musculoskeletal Disorders. This guidance provided recommendations for nursing home employers to reduce the number and severity of work-related musculoskeletal disorders in their facilities. It states that manual lifting should be minimized in all cases and eliminated when feasible. It also encouraged other care settings such as assisted living centers, homes for the disabled, homes for the aged, and hospitals to implement the guidelines. These guidelines further asserted that health care employers should involve employees to identify workplace patient handling concerns and to participate in the evaluation of lifting equipment and endorsed the use of patient handling assessment tools developed by the Veterans Health Administration Patient Safety Center of Inquiry and using patient handling equipment. Of important note, however, is that these guidelines are not enforceable by federal OSHA since they are not codified as a regulatory standard. The guidelines were revised and updated in 2009.

In November 2004, the Institute of Medicine (IOM) published a report titled, *Keeping Patients Safe: Transforming the Work Environment of Nurses* (IOM, 2004). Building on two previous reports focused on error-conducive attributes of the U.S. health care delivery system, this report examined issues of patient safety from the perspective of work environments in which patient care is provided. The report discussed the aging nursing workforce and subsequent implications for safety in the nursing practice environment. Specifically, the report states that “[t]he loss of strength and agility that often accompanies aging affects the ease with which nurses can perform patient care activities that require them to turn, lift, or provide weight-bearing support to patients” (p. 71). The report points out that “[e]rgonomic patient and staff furniture and work tools will be needed to decrease the risk of injuries to patients (and nurses as well)” (p. 72). Despite no explicit mention of safe patient handling programs and equipment, these statements indicate the importance of applying sound ergonomic approaches to patient handling to achieve a safe practice environment.

Recognizing the interface between patient safety and healthcare worker safety, The Joint Commission signed an Alliance agreement with federal OSHA in July 2004 (and renewed August 2013) (OSHA, n.d.). The agreement states that “[b]oth organizations are committed to protecting health care employees’ health and safety.” Ergonomics was identified as one of the occupational health areas of emphasis. The Joint Commission also released two reports that alerted healthcare

organizations of the importance to create practice environments that value safe patient handling strategies. One report, titled *Healthcare at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis* (The Joint Commission, 2005), noted that “[w]ith an aging nursing workforce and an increasingly corpulent population, health care organizations will find it a basic necessity to acquire ergonomic technologies that reduce the risk of physical strain and injury in the delivery of patient care” (p. 12), and, recommended that hospitals “[a]dopt information, ergonomic and other technologies designed to improve workflow and reduce risks of error and injury” (p. 21 and 27). Another report, *Health Care at the Crossroads: Guiding Principles for the Development of the Hospital of the Future* (The Joint Commission, 2008), asserted that “hospital design is integral to protecting hospital workers and enhancing the work they do,” and recognized that, “[a] great deal of heavy lifting, turning, and transporting patients goes on in hospitals that could be alleviated by proper hoists and other ergonomic technologies” (p. 37), and, “[i]nvolving staff in the design process is essential for creating a physical environment that improves work flow” (p. 37).

In the absence of any federal or state mandate, nationwide healthcare systems can generate organizational approaches to address safe patient handling. A prime example is when, in 2010, the U.S. Veterans Health Administration (VHA) issued Directive 2010-032, *Safe Patient Handling Program and Facility Design* (VHA, 2010). This directive provided for the implementation of safe patient handling programs throughout all VHA facilities. It specifically stated that “It is VHA policy that a SPH [safe patient handling] Program to protect caregivers and patients from injuries due to patient handling and movement must be established and maintained in all VHA facilities and that new construction and renovation projects must incorporate appropriate and necessary patient handling

and moving equipment at all VHA facilities. Key features of this Directive included:

- Establishing a facility based safe patient handling committee
- Carrying out a detailed facility ergonomic evaluation
- Using patient handling equipment, prioritizing ceiling lifts as appropriate
- Ensuring adequate and accessible storage space for portable or floor-based patient handling equipment.
- Training of facility-wide unit peer leaders in safe patient handling
- Tracking and use of injury data
- Supporting a .5 FTE safe patient handling coordinator position for each facility

This VHA Directive was replaced with VHA Directive 1611 (issued on March 23, 2018). It enhanced the prior directive by:

- Requiring a safe patient handling and movement program in every VHA health care system
- Ensuring that all veterans have equitable opportunity to access safe patient handling and movement technology to meet and improve their care needs
- Having employees utilize safe patient handling and movement technology for routine patient handling tasks that require lifting over 35 pounds of patient

weight, or when performing tasks that require the generation of excessive force, such as repositioning a patient in a bed by pushing or pulling

- Incorporating patient handling and mobility technology into the design of new construction or renovation projects

It is important to note that these Directives were prompted by successes at the VHA Sunshine Healthcare Network (VISN 8) in Florida, which included the VA Patient Safety Center of Inquiry of Inquiry in Tampa. This center has led the nation in developing the research evidence for safe patient handling, including documenting the reduction in injuries to health care workers and patients, and the economic benefit of implementing safe patient handling programs.

In the past, effort was made to establish a national safe patient handling law through a proposed Nurse and Health Care Worker Protection Act (H.R. 2381 in 2009, and H.R. 4266 in 2015). Had it been enacted, it would have required the U.S. Secretary of Labor to propose a standard on safe patient handling and injury prevention to prevent musculoskeletal disorders for direct-care registered nurses and all other health care workers. It would have also required the elimination of manual lifting of patients using mechanical devices, except where patient care may be compromised. The stipulations of these proposed bills paralleled those included in the current Washington State Safe Patient Handling Law enacted in 2006.

SAFE PATIENT HANDLING AND MOVEMENT CONCEPTS

Safe patient handling and movement refers to a multifaceted approach to reduce the risk of injury to nurses and direct patient care providers secondary to patient handling tasks, while also providing patients a more secure, dignified means to be lifted, transferred, and repositioned. Utilizing a multifaceted, ergonomic approach has been shown to effectively reduce the occurrence of back pain and musculoskeletal injuries, modified duty days and absences, as well as dramatically decrease costs associated with such work-related health problems (Garg & Owen, 1992; Lynch & Freund, 2000; Nelson et al., 2006; Powell-Cope et al., 2014; Teeple et al., 2017).

Comprehensive safe patient handling and movement programs (as principally delineated by the Patient Safety Center of Inquiry; 2005) should include the following elements (de Castro, 2004; Garg & Owen, 1992; Nelson et al., 2006; Owen 2000; Wardell, 2007):

- **An organizational no manual lift policy.**
- **Establishment and empowerment of a safe patient handling committee.**
- **Assessment and evaluation of worksite environments and job tasks for patient handling related hazards.**
- **Initial and periodic training of front-line direct patient care providers.**
- **Assessing patient handling needs.**
- **Use of mechanical patient handling equipment and assistive devices, as well as lift teams (as appropriate or needed for the situation).**
- **Program evaluation.**

EQUIPMENT AND DEVICES

The development of patient handling equipment and devices has made the manual performance of patient handling unnecessary. Safe patient handling equipment and devices control the hazards associated with patient handling by technologically “engineering out” the energy/force imposed onto the patient care provider during the act of lifting, transferring or repositioning patients. Their use:

- Reduces the incidence and severity of musculoskeletal injuries among direct patient care staff, and,
- Improves patient safety and quality of care with regard to security, comfort, and dignity).

Examples of safe patient handling equipment and devices include the following (sourced from the “Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement” developed by the VA Patient Safety Center of Inquiry).

Air assisted lateral sliding aids

A flexible mattress is placed under a patient in the same manner as a transfer board, with a portable air supply attached which inflates the mattress, allowing the patient to be moved on a cushion of air.

Friction reducing lateral sliding aids

These are simple low-cost devices, usually made of a smooth fabric that is foldable and easy to store. Appropriate for assist with bed-to-stretcher type transfers and with repositioning patients in bed. These devices resemble a soft transfer board that is positioned beneath the patient providing a surface for the patient to be moved easily due to the friction reducing properties of the device. Properly designed handles can reduce horizontal reach.

Mechanical lateral transfer aids

Stretchers are available that are height adjustable and have a mechanical means of transferring a patient, eliminating the need for manually sliding the patient and minimizing risk to the health care worker. Some are motorized, and some use a hand crank mechanical device.

Transfer chairs

Some wheelchairs and dependency chairs can convert into stretchers where the back of the chair pulls down and the leg supports come up to form a flat stretcher. These devices facilitate lateral transfer of the patient and eliminate the need to perform a lift transfer in and out of wheelchairs. There are versions available that also have a mechanical transfer aid built in for a bed to stretcher or stretcher to bed transfer.

Powered full body sling lifts

The sling lifts are mounted on a portable base with a minimum of two caregivers to operate safely. Sling lifts are usually used to move patients out of beds, into and out of chairs, for toileting tasks, bathing tasks, and for any type of lift transfer for patients unable to bear weight or safely transfer with direction only. Use of ceiling mounted sling lifts is growing. Tracks are installed into the ceiling in order to easily maneuver the patient around the room.

Powered standing assist and repositioning lifts

These lifts provide an alternative to full body sling lifts. These allow patients who are partially dependent and have some weight bearing capabilities to participate in the movement. They are helpful to move patients in and out of chairs and for toileting. Powered standing assist and repositioning lifts can be maneuvered in smaller areas, such as bathrooms. There are some variations in the sling design, but the basic concept is of simple design and easy to place around the patient.

Standing assist and repositioning aids

Some patients may only need a little support to stand and can help themselves if they have a support to grasp. Various types of devices can be provided to assist a patient from a seated to standing position by allowing them to hold on to a secure device and pull themselves up.

Bed improvements to facilitate transfer or repositioning

Current bed technologies incorporates many ergonomic improvements. Some examples include beds that eliminate the need for bed to chair transfers by easily converting to a chair. Another innovation in bed design, referred to as shear – less pivot, reduces the need to constantly reposition a patient in the bed by minimizing the amount of slippage down to the foot of the bed experienced by the patient when raising the head of the bed. Further innovations with bed mattress surfaces can aid rotation and move a patient as needed in many intensive care units, by utilizing air bladders incorporated into the mattress surface.

Sliding boards

For seated bed-to-chair or chair-to-toilet transfers, low cost sliding boards are available. Sliding boards are usually made of a smooth rigid material with a low friction coefficient which allows for an easier sliding process. These boards act as a supporting bridge when seated slide transfers are performed. Some, but substantially reduced, manual effort is still required to move the patient, however, sliding boards offer considerable improvement at a minimal cost.

Gait/transfer belt with handles

An object with handles improves the grasp opportunity for the worker and thereby reduces the risk. Gait/transfer belts are installed on patients or residents, usually around the area of the waist providing handles for a worker to grasp when assisting or transferring a partially dependent patient or resident, as shown. Small hand-held slings that go around the patient can also facilitate a transfer by providing handles. These options are available for patients with weight bearing capability that needs only minimal assistance.

An important aspect of investing in safe patient handling equipment and devices is that they should be evaluated carefully before any purchase is made. Products and vendors should be canvassed widely as the development and improvement of equipment of devices continues to evolve. An essential feature in evaluating equipment and devices is that a facility's safe patient handling (or safety) committee should be given the authority to recommend or decide what kinds should be purchased. Furthermore, these decisions should be made with input from frontline staff nurses and other direct patient care providers. Vendors will provide product information materials and possibly even offer equipment products for a facility to try out for a short time. When selecting patient handling equipment and devices, the following criteria should be used (taken from the "Patient Care Ergonomics Resource

Guide: Safe Patient Handling and Movement" developed by the Patient Safety Center of Inquiry (Tampa, FL) of the Veterans Health Administration):

1. The devices should be appropriate for the task that is to be accomplished
2. The device must be safe for both the patient and the healthcare worker. It must be stable, strong enough to secure and hold the patient, and permit the caregiver to use good body mechanics
3. The device must be comfortable for the patient. It should not produce or intensify pain, contribute to bruising of the skin, or tear the skin
4. The device should be understood and managed with relative ease
5. The device must be efficient in the use of time
6. Need for maintenance should be minimal
7. Storage requirements should be reasonable
8. The device must be maneuverable in a confined workspace
9. The device should be versatile
10. The device must be able to be kept clean easily
11. The device must be adequate in number so that it is accessible
12. Cost

RESPONSIBILITIES OF THE NURSE

It is the responsibility of the practicing nurse to recognize characteristics of the work environment and job tasks that place the nurse and/or patient at risk. Safe patient handling has the greatest impact if it is incorporated into nursing practice throughout a facility. Staff should assess patient handling needs considering patient characteristics and conditions in order to select the safest equipment and approaches. A determination should be made about who assesses patient handling practices and who updates policies and practices. Patient handling assessments should be conducted both initially and periodically as lifting, transferring, and repositioning practices may change over time.

To assist the practicing bedside nurse in handling patients safely the use of the following acronym S-A-F-E-L-I-F-T is recommended:

S = Space

Is the environment free from all hazards? Is there adequate space to perform a task? The area where the task is to be performed should be prepared removing obstacles that may interfere with safe movement. Potentially confusing wall/floor patterns, distance to be moved, lighting, noise, flooring, and temperature should be taken into consideration prior to the actual movement of a patient.

A = Assess

The nurse should assess the patient's physical and mental condition, care needs, ability to assist and weight-bearing capability in relation to the planned lift or transfer activity. The ability for the patient to be cooperative during the activity should be evaluated so a determination can be made regarding equipment or staff support needed. Assessing the physical ability of the patient to provide assistance should include the ability to bear weight and/ or use upper body extremity strength.

F = Function

Using nursing assessment information, the nurse needs to determine which lifting function needs to be performed, e.g. lateral transfer, bed-to-chair, full-body lift, or repositioning. The use of safe patient handling algorithms can assist the nurse to undertake approaches that reduce risk for injury to both the nurse and patient. Examples of safe patient handling assessment criteria and algorithms can be found at: <http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm>.

E = Equipment

The nurse should select the appropriate lifting equipment based on the patient assessment and type of move to be completed. For example, for patients exceeding 200 lbs., use of a friction reducing device with at least three staff members is recommended. Use of a bariatric algorithm should also be considered. For patients weighing less than 200 lbs. a friction reducing device should also be considered with two to three staff partially assisting the patient. One of the most frequent barriers to safe patient handling is the absence of available appropriate equipment; thus, patient care staff need to communicate to their immediate supervisor their needs such that the appropriate number, type, and location of stored equipment can be addressed. A culture of patient safety can be promoted when open communication, use of evidence-based practice, teamwork, and patient-centered care are utilized. Therefore, when necessary, consideration should be given to completing an incident report notifying administration of unmet needs such that the situation can be documented for quality improvement purposes.

L = Lift Team

As needed and appropriate, the nurse should call for co-workers to assist with a patient handling or movement task. During busy times, one may have the tendency to carry out a task alone in order to get it done. This is when serious injuries can occur. Soliciting and employing help from other team members is a key approach to reducing the risk of injury to the patient and the nurse. Even when getting help from co-workers, manual patient handling should be avoided and use of lifting, transferring, and repositioning equipment and devices should be prioritized.

I = Injury

The nurse should be aware of the kinds of injuries that might be experienced as a consequence of patient handling tasks. Knowing how many and what types of injuries have occurred is helpful in assessing the risks and needs for a facility's safe patient handling program. Assessment data can be obtained from the organization's OSHA injury logs as well as from worker's compensation data, incident reports, and surveillance data. The more specific the data is, the more useful it is. To help identify and understand high injury risk areas, a worksite analysis through a walk-through, observations, and staff surveys can be useful. The focus can be facility-wide or on a specific unit or department, but should identify high-risk injury locations or patient handling tasks. Also, a list of existing, available equipment should be made and updated regularly.

F = Frequency

The nurse needs to evaluate the frequency of handling tasks for assigned patients. The workload and time of the individual nurse should be managed such that lifts and transfers can be performed safely. It should be noted that injuries occur as a result of force (amount of physical effort required to perform the task or maintain control of the equipment), repetition, and/or awkward postures (assuming positions that place stress on the body such as reaching above shoulder height, kneeling, squatting, leaning over a bed, or twisting the torso while lifting).

T = Training

The nurse needs to participate in and complete training sessions to remain current and competent to perform safe handling tasks and have the correct knowledge regarding proper use of equipment and devices. The nurse needs to request additional training when needed. As a complementary effort, patients and their personal caregivers, including family members or friends, should be instructed to call for staff assistance when a lifting, repositioning, or transferring task is needed and the nurse is not present. This awareness and education can be done by explaining the facility's safe patient handling policy and procedures as part of the admission process to the nursing unit, followed up with consistent, periodic reminders. Patients and their personal caregivers should be advised that they themselves suffer an injury as a consequence of carrying out a patient handling task without proper assistance and appropriate use of equipment.

SUMMARY

In summary, nurses have the responsibility to protect themselves as well as their patients. Frontline nurses and other direct patient care workers should actively participate in shaping, evaluating, and refining overall facility-based safe patient handling program efforts, including:

- Joining their facility's safe patient handling committee
- Completing safe patient handling training
- Assessing their work units for potential patient handling hazards, and
- Reporting (worker and patient) injury incidents.

Workplace walk-throughs, surveying staff, and analyzing injury data can assist in identifying hazards. The facility safe patient handling committee should be informed of recognized risks. Consideration should be given to management support, budgets, staff readiness and training needs, physical space, and remodeling or construction plans.

WSNA'S CONTINUING ROLE

The Washington State Nurses Association has a history of being a strong advocate for the development, implementation and ongoing monitoring of compliance with the Washington State Safe Patient Handling Law. Through the work of the Cabinet on Economic and General Welfare, Professional Nursing and Health Care Council, Legislative and Health Policy Council, and the Occupational and Environmental Health and Safety Committee, WSNA continues to acknowledge safe patient handling as a priority issue for the association requiring ongoing support. WSNA is available as a resource to nurses promptly assisting nurses when notified of potential violations of the law. Education regarding safe patient handling is made available via on-line continuing education, print materials, consultation, and web site information; including links to additional resources and a curriculum DVD developed in conjunction with Washington State University. WSNA is supportive of and interested in promoting research examining the effectiveness of the Washington State Safe Patient Handling Law. Additionally, WSNA believes that the protections provided by the safe patient handling law to hospital staff should be extended to other health care settings such as clinics, long-term care facilities, and home health care settings.

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